Response®
Electronics Limited

SA3 E PLUS
6 Zone Wirefree Alarm System
with Voice Dialler

Installation and Operating Instructions

Contents

For system installations incorporating the SA3CU E Control Panel refer to this Manual and disregard any other instructions supplied.

Kit Contents

Alarm Components:

1 x 6 Zone LED Control Panel with Voice Dialler

2 x PIR Movement Detectors

2 x Magnetic Contact Detectors

1 x Remote Control

1 x External Solar Siren

Also included:

Power Supply Adaptor

Telephone Connection Lead

Installation & Operating Instructions

Fixing pack

Batteries included:
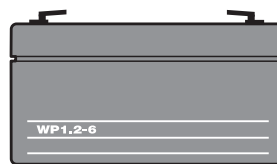
x 3
6V/1.2Ahr Sealed lead acid battery *(for Control Panel and External Solar Siren)*
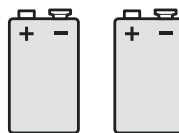
x 2
9V PP3 Alkaline battery *(for PIR Movement Detectors)*

x 5
3V CR2032 Lithium cells *(for Remote Control and Magnetic Contact Detectors)*
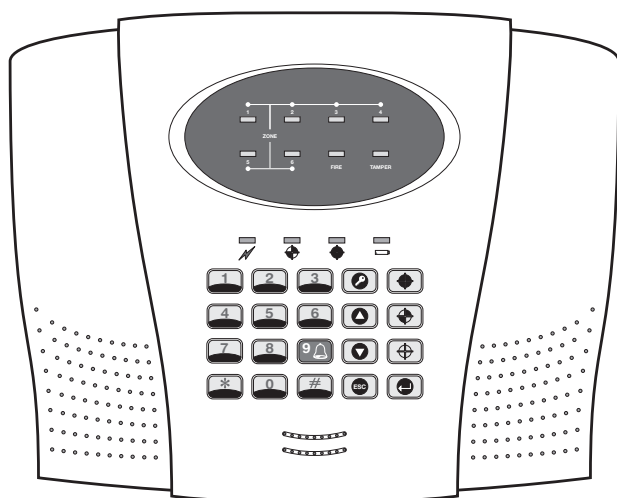
Control Panel
(SA3CU E PLUS)
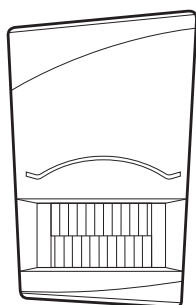
PIR Movement Detector
(SAP E)
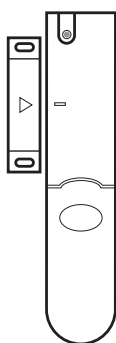
Magnetic Contact Detector
(SAM E)

Remote Control
(SAR E)
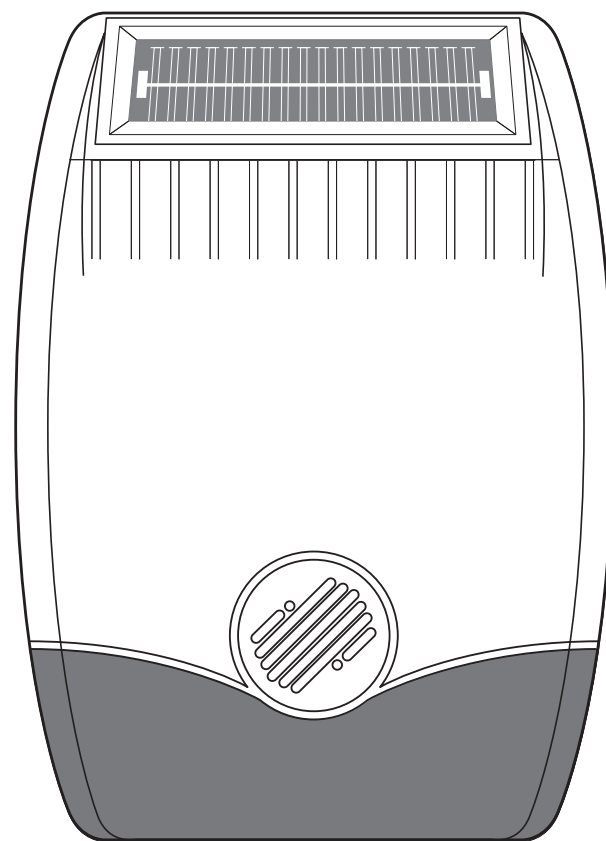
External Solar Siren
(SASS E)

Important: *Please check all items listed above are included in the package.*

Note: Diagrams are for illustration purposes only actual appearance may vary.

For system installations incorporating the SA3CU E Control Panel refer to this Manual and disregard any other instructions supplied.

Introduction and Overview

System Arming

The system has a 'Full Arm' and a 'Part-Arm' mode.

'Full Arm' will arm all zones while the 'Part-Arm' mode will only arm the zones that are enabled for 'Part-Arm'.

For example:
The system could be set such that during night time, 'Part-Arm' would arm only zones protecting the lower floor and outbuildings, leaving the upper floor free for movement without triggering the alarm.

However, when the property is left un-occupied, the 'Full Arm' mode will arm all zones to protect the entire property, (i.e. upper and lower floors and outbuildings).

Zones

The system incorporates 6 wirefree Alarm Zones for the connection of the system Detectors that are used to independently monitor different areas of the property. In addition to standard intruder protection, each zone may also be set to operate in one of three other modes:

- **Personal Attack mode**
  provides 24 hour monitoring of any Personal Attack (PA) switches incorporated into the system.

- **24-hour Intruder mode**
  provides 24 hour intruder protection for areas where continuous monitoring is required, (e.g. gun cupboards).

- **Fire mode**
  provides 24 hour monitoring of any Fire/Smoke detectors incorporated into the system.

Entry/Exit Delay

Each zone can be programmed to be Armed in either Instant or Delay mode.

Usually the zone covering the main entrance door and the route to and from the Control Panel would be set in Delay mode. This allows time for the user to exit the property after setting the system at the Control Panel or to Disarm the system before an alarm condition is triggered when re-entering the property. The remaining zones would be set as Instant allowing them to initiate an alarm immediately a Detector on these zones are triggered.

Delay Armed zones will not become fully armed until after the Exit delay period has expired. When a Detector on a Delay Armed zone is triggered, an alarm condition will not be triggered until after the Entry period has elapsed. If the system is not disarmed during the delay period, an alarm condition will occur when the delay period expires.

Instant Armed zones will immediately initiate an alarm as soon as the zone is triggered.

Zone Lockout

If a Detector on an active zone is triggered while the system is armed, an alarm condition will occur. After the programmed alarm duration has expired the alarm will stop and the system will automatically reset in the armed mode. Subsequent Detectors triggered will again initiate an alarm condition. If a single zone initiates an alarm condition three times then that zone will be 'Locked Out' and any further alarm signals from that zone will be ignored until the system is disarmed.

Note: The 'Zone Lockout' feature can be disabled if required.

Tamper Protection

All system devices (except Remote Control Units) incorporate Tamper protection features to protect against unauthorized attempts to interfere with the device. Any attempt to remove the battery cover from any device (except a Remote Control) or to remove the Solar Siren or Control Panel from the wall will initiate an alarm condition even if the system is Disarmed (unless the system is in Test or Programming modes).

Voice Dialler

This system incorporates a telephone voice dialler which is used to call for help and/or notify the user that the system has been triggered and an alarm has occurred.

If the Voice Dialler is enabled and an alarm condition occurs, the system will call for help using your pre-recorded alarm message and up to four telephone numbers. When the telephone voice dialler is activated it will call the first enabled number in the dialing

sequence and replay the recorded alarm messages for the set 'Play Time'. The recipient can acknowledge the message by pressing the [✱] button on their telephone keypad. If the call is unanswered or an acknowledgement signal is not received then the next active number in the dialing sequence will be called. The dialler will continue calling each number in turn until either all numbers in the sequence have been dialed the set number of times or the dialing sequence is cancelled by an acknowledged signal from the recipient.

Jamming Detection

In order to detect any attempts to illegally jam the radio channel used by your alarm system, a special jamming detection function is incorporated into the Control Panel and also on some Solar Siren models. If this feature is enabled, and the radio channel is jammed continuously for 30 seconds, when the system is armed, the Solar Siren will emit a pre-alarm series of rapid bleeps for 5 seconds. If the jamming continues for a further 10 seconds or more a full alarm condition will occur. In addition if the system is jammed for more than three periods of 10 seconds in a 5 minute interval, this will also generate a Full Alarm condition. The jamming detection features in the Control Panel and Solar Siren operate independently.

The Jamming Detection circuit is designed to permanently scan for jamming signals. However, it is possible that it may detect other local radio interference operating legally or illegally on the same frequency. If you are planning to operate the Jamming Detection feature we recommend that you wait at least 30 days before activating this feature, this will allow time for you to become familiar with the operation of your system.

Battery Monitoring

All devices powered by non-rechargeable batteries incorporate a battery level monitoring feature which warns when the battery status is low.

In addition the Control Panel will also indicate a low battery status on any PIR Detector or Magnetic Contact Detector on the System.

Batteries on any device indicating a low battery status must be replaced immediately.

System House Code

In order to prevent any unauthorized attempt to operate or disarm your system, you must set your system to accept radio signals only from your own devices. This is done by setting a series of eight miniature (DIP) switches in all devices (except the Control Panel) to the same ON/OFF combination (the House Code) selected by the user/installer. The Control Panel is then programmed to operate only with devices set to this House Code.

All Detectors and Remote Control Unit(s) must be set with the same House Code in order for the system to operate correctly.

Inside the Siren, Detectors and Remote Control Unit is a series of 8 DIP switches.

The House Code is set by moving each of the 8 switches in each device to the same randomly selected ON/OFF sequence. When setting the DIP switches, ensure that each switch 'clicks' fully into position. Use the tip of a ballpoint pen or a small screwdriver to move each switch in turn.

Note: It is recommended that the system House Code is always reset to a code other than the factory default.

Planning and Extending your Wirefree Alarm System

The example below shows a typical property incorporating the suggested positions for the Control Panel, PIR and Magnetic Detectors for optimum security.

Use this as a guide for your installation in conjunction with the recommendations contained in this manual for planning your intruder alarm system.
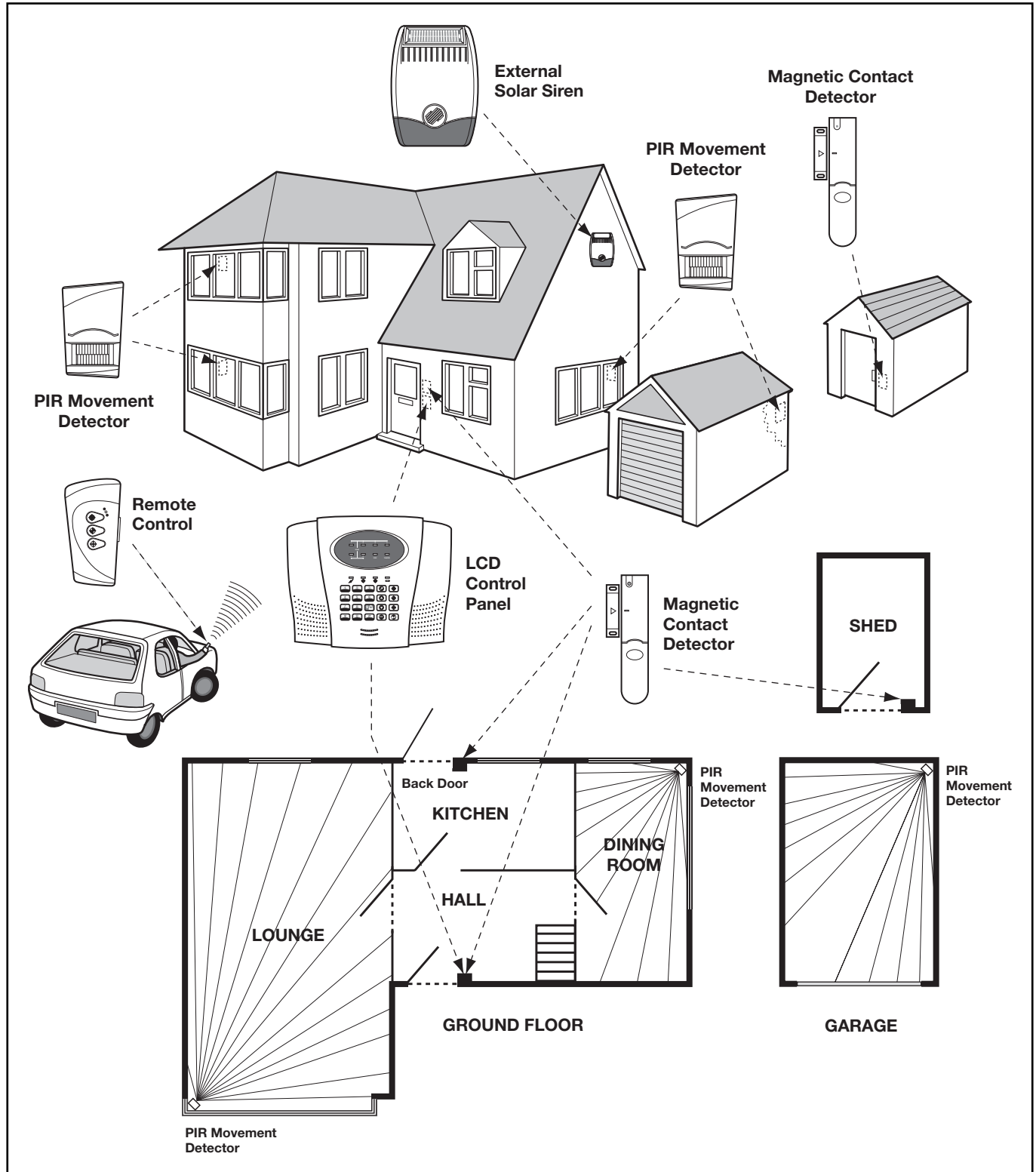
Before attempting to install your Alarm System it is important to study your security requirements and plan your installation.

The alarm system may be extended at any time to provide even greater protection by fitting additional devices to meet your personal security needs.

Control Panel

External view of Control Panel

Positioning the Control Panel

When choosing a suitable location for the Control Panel, the following points should be considered.

1. The Control Panel should be located in a position out of sight of potential intruders and in a safe location, but easily accessible for system operation.

2. The Control Panel should be mounted on a sound flat surface to ensure that the rear tamper switch on the Control Panel is closed when the Panel is mounted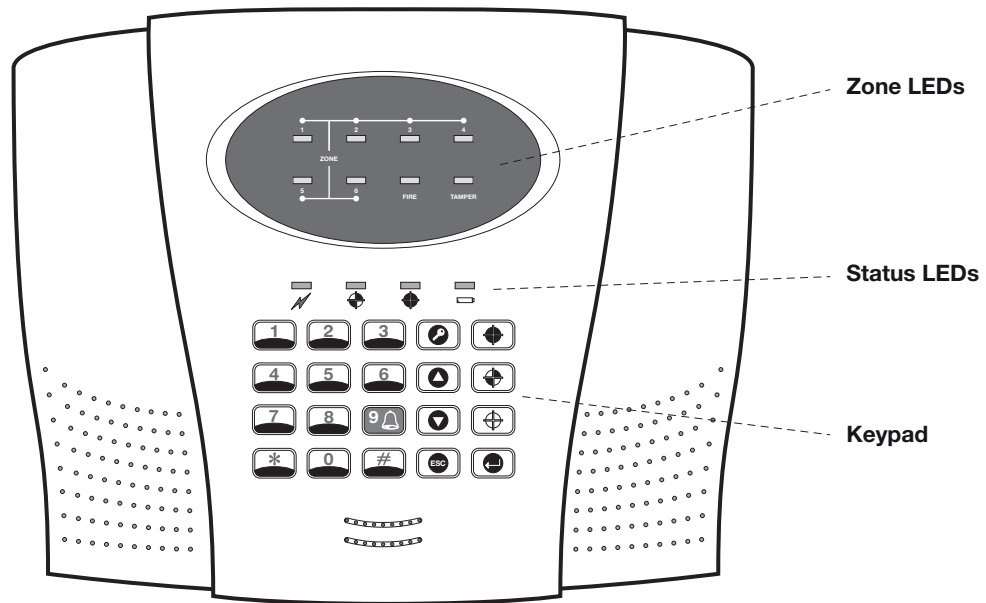. The Control Panel should be mounted at a convenient height of between 1.5 and 2m and in a position where it will be seen each day.

   Note: If small children are in the household, a further consideration should be given to keeping the units out of their reach.

3. It is recommended that the Control Panel should be positioned such that the Exit/Entry tone (emitted by the Control Panel) can be heard from outside the property.

4. The Control Panel should be mounted within a protected area so that any intruder cannot reach the Control Panel without opening a protected door or passing through an area protected by a PIR Detector when the system is armed.

5. The Control Panel must be located within reach of a mains socket.

6. If the telephone voice dialler is to be used then the Control Panel will need connecting to a convenient telephone point.

7. Do not locate the Control Unit closer than 1m to any large metallic object, (e.g. mirrors, radiators, etc) as this may affect the radio range of the Control Panel.

Installing the Control Panel

1. Undo the two captive fixing screws on top of the panel and open the cover. The cover is hinged along the bottom edge.

2. Unclip and remove the two back-up batteries on either side of the panel.

3. Hold the Control Panel in position on the wall and mark the positions of the four fixing holes. Remove the Panel and drill four 5mm holes and fit the 25mm Wall Plugs.

   Note: The wall plugs supplied with the product are not suitable for plasterboard walls, if mounting the Control Panel onto plasterboard use proprietary wall plugs.

   Important: Do not drill the fixing holes with the Control Panel in position; as the resulting dust and vibration may damage the Control Panel's internal components and invalidate the guarantee.

External Tamper Switch Jumper Link P51

Upper Keyhole Fixing Hole

– Terminal (Blue Lead)

+ Terminal (Red Lead)

Lower Fixing Hole

Power Supply Cable Route

Upper Keyhole Fixing Hole

+ Terminal (Blue Lead)

– Terminal (Black Lead)

Reset Jumper Link P1

Power Supply Jack Socket
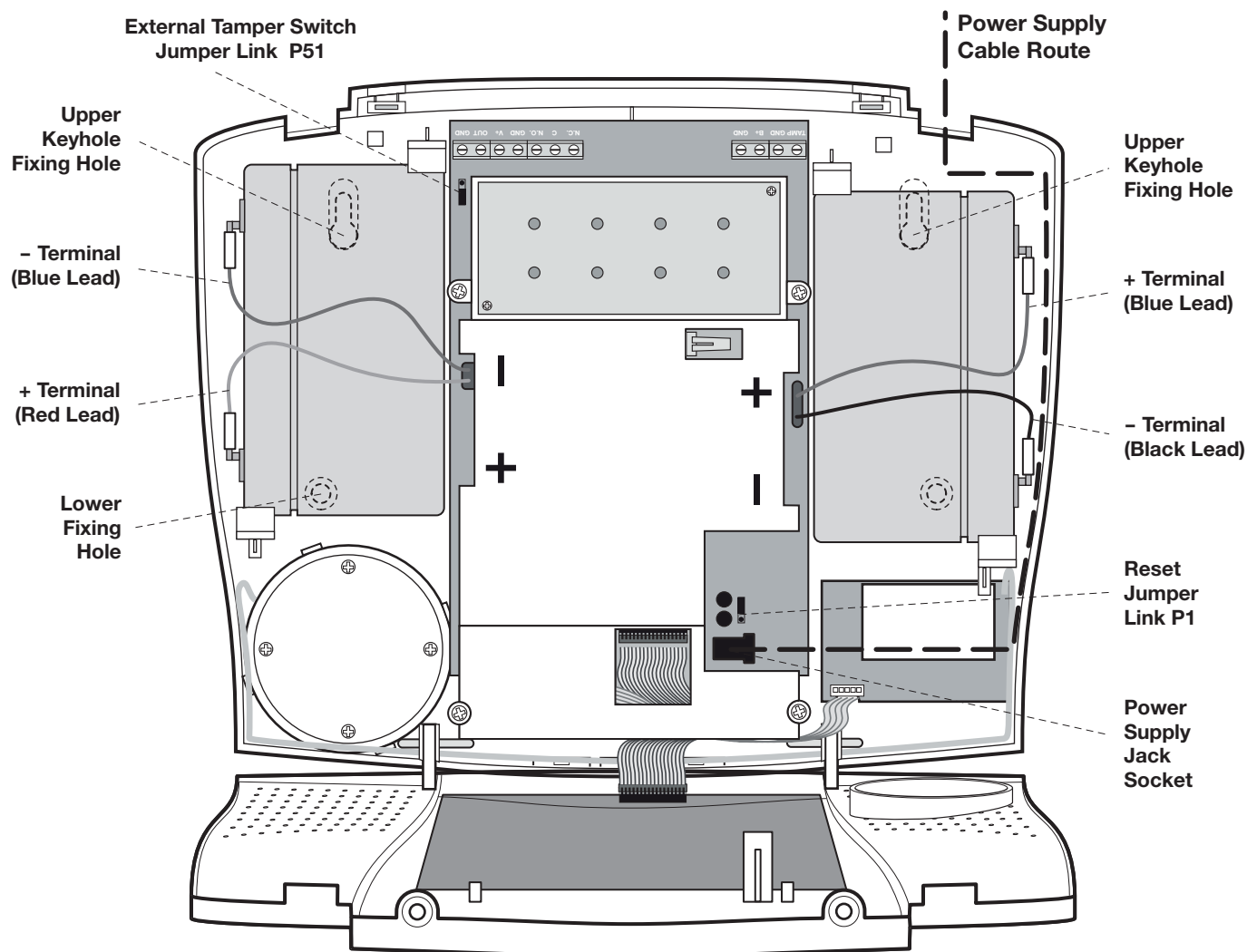
Inside view of Control Panel

4. Fit two 18mm No. 4 screws into the top holes until almost fully home and hang the Control Panel over the screws using the two keyhole slots in the top corners of the panel casing.

5. Route the cable from the Power Supply Unit up behind and on the right hand side of the Control Panel and connect the plug to the DC power socket in the panel. Ensuring that the cable is not trapped between the Control Panel and the wall.

6. Fix the Control Panel to the wall using two 18mm No. 4 screws in the lower two fixing holes in the Control Panel and tighten the upper fixing screws until they just grip the casing. Do not over tighten the fixing screws or this may damage the casing.

7. Ensure that the 'Reset' and the 'Hard-Wired Siren tamper detect' jumper links are set in the OFF position.

8. Connect battery leads to both back-up batteries and refit batteries.

Battery 1 (left):   Red lead to   **+** battery terminal
                    Blue lead to **–** battery terminal

Battery 2 (right): Blue lead to **+** battery terminal
                    Black lead to **–** battery terminal

Important: Take care when connecting battery leads to the batteries as connecting incorrectly could damage the batteries or the Control Panel.

Note: The Power LED may flash to indicate that the unit is being operated from the back-up batteries and that mains supply is not present.

9. Close the lid of the Control Panel and tighten the captive fixing screws.

10. Plug in and switch ON the Power Supply Unit, (the Power LED should illuminate).

11. If required, connect the Control Panel to the telephone line using the cable supplied by inserting small RJ11 plug into socket marked LINE located on the bottom edge of the Control Panel.

Connect the BT plug on the other end of the lead to an appropriate telephone outlet.

If the cable supplied is not long enough to reach a suitable phone point then it will need extending using a coupler and extension lead (not supplied).

Note: If the Panel Tamper alarm sounds during the installation reset the alarm by pressing:

⊕ , **1** **2** **3** **4** , ⏎

on the Control Panel Keypad.

Setting the Control Panel House Code

With the unit in Standby mode (Power LED only illuminated).

1. Press 🔑 , **1** **2** **3** **4** , ⏎

   The Control Panel will beep twice and the Arm and Part-Arm LEDs will illuminate. All Zone, Fire and Tamper LEDS will flash.

   This puts the Control Panel into programming mode.

2. Press **2** 🔑

   The Zone LEDs 1-6, Fire and Tamper LEDs will illuminate to indicate the current House Code setting with an illuminated LED indicating a setting of 'ON' and LEDs not illuminated indicating a setting of 'OFF'. For example, a house code of 'ON', 'ON', 'ON', 'ON', 'OFF', 'OFF', 'ON', 'OFF', will be indicated with zone LEDs 1-4 illuminated, Zones 5 & 6 'not illuminated', Fire Zone 'illuminated' and Tamper Zone 'not illuminated'.

3. The system House Code can be set either directly at the Control Panel or via a Remote Control Unit.

   At the Control Panel:

   a) By pressing buttons 1-8 on the Control Panel, setting the status LEDs so that they indicate the required house code setting. The LEDs will switch to the opposite state each time the button is pressed.

   LED ON = 1, (House Code DIP Switch On)
   LED OFF = 0, (House Code DIP Switch Off)

   b) Press ⏎ to save the new setting and return to programming mode.

b) Press **ESC** to return to programming mode without saving.

Using a Remote Control Unit:

a) With the required House Code already set on the remote control, press the ⊕ button on the Remote Control.

   The Control Panel will beep twice to acknowledge the signal.

   The Zone, Fire and Tamper LED status will be updated to correspond with the House Code set on the Remote Control and now programmed into the Control Panel.

b) Press ⏎ to return to programming mode.

4. Press **ESC** to exit programming mode and return to Standby

5. Press ⊕ , **1** **2** **3** **4** , ⏎

   The Control Panel will beep and the Arm and Part-Arm LEDs will flash.

   This puts the Control Panel into test mode.

Remote Control Unit

The Remote Control Unit is used to Arm, Part-Arm and Disarm the system.
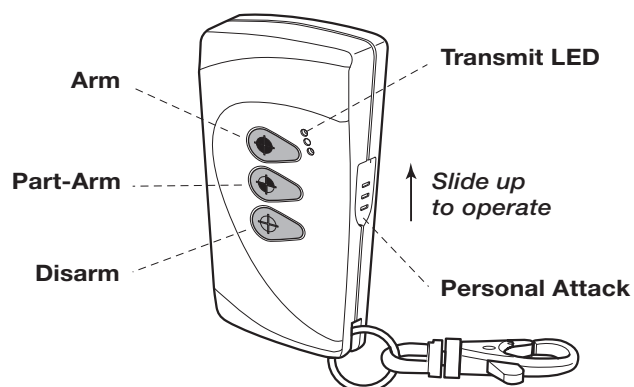
The Remote Control Unit also incorporates a Panic switch. Activating the Panic switch on the side of the Remote Control will immediately initiate a Full Alarm condition whether the system is Armed or Disarmed. The alarm can be cancelled by pressing the 'DISARM' button on the Remote Control or via the Control Panel.

Any number of Remote Control Units can be used with your system, providing they are all coded with the same system House Code.

The Remote Control uses a CR2032 type Lithium cell which under normal conditions will have a typical life in excess of 1 year. Under normal battery conditions the LED on the Remote control will illuminate only when a button is pressed. However, under low-battery conditions this LED will flash every time the button is pressed. When this occurs the battery should be replaced as soon as possible.

## Setting the Remote Control

1. Remove the front cover by undoing the small screw on the rear of the Remote Control.

2. Located above the battery is a row of 8 DIP switches. Select and record a random combination of 'ON' and 'OFF' positions for the DIP switches. This will be the system House Code that enables all elements of your transmitters to communicate with the Control Panel.

   Important: The House Code for your system should be changed from the factory default setting.

3. Ensure that the jumper link located immediately below the House Code DIP switches is fitted in position for use with this alarm system.

4. Insert the battery under the clip ensuring that the +v terminal faces upwards away from the PCB.

5. Replace the front cover and fixing screw.

House Code Dip Switches

Jumper Link

Battery Clip

Battery
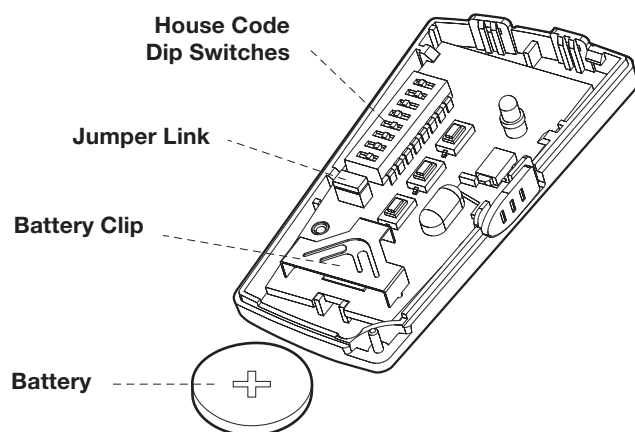
Passive Infrared (PIR) Movement Detectors

PIR Detectors are designed to detect movement in a protected area by detecting changes in infra-red radiation levels caused, for example, when a person moves within or across the devices field of vision.

If movement is detected an alarm signal will be generated, (if the system and alarm zone is armed).

Note: PIR Detectors will also detect animals, so ensure that pets are not permitted access to areas fitted with Passive Infra Red Detectors when the system is armed.

Any number of PIR Detectors can be used with your system, providing they are all coded with the system House Code and are mounted within effective radio range of the Control Panel.

The PIR Detector is powered by a PP3 Alkaline battery which under normal conditions will have an expected life in excess of 1 year. When the battery level drops, with the PIR Detector in normal operation mode and the battery cover fitted, the LED behind the detection window will flash. When this occurs the battery should be replaced as soon as possible.

Choosing a position for the PIR Detector

The recommended position for a PIR Detector is in the corner of a room mounted at a height between 2 and 2.5m. At this height, the PIR Detector will have a maximum range of up to 12m with a field of view of 110°.

Top View

Side View

110°

More Sensitive   Less Sensitive
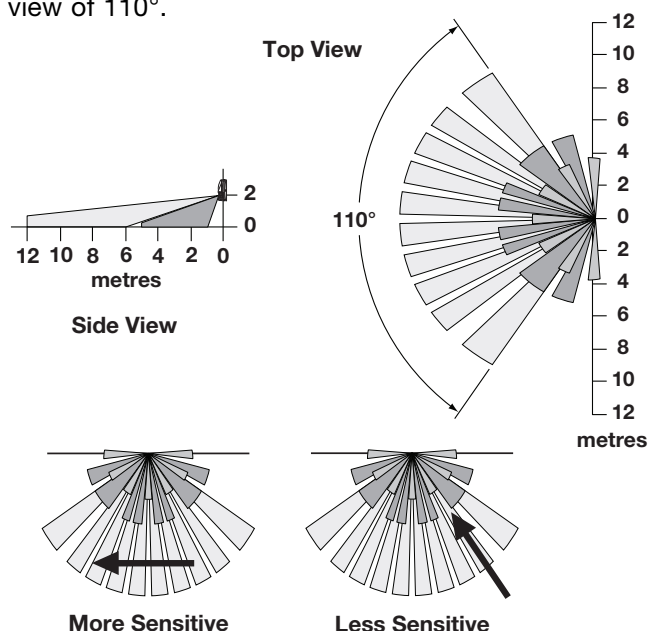
The Position of the PCB inside the PIR Detector can be set to 5 different positions to adjust the range of the detection pattern created by the PIR Detector. Setting the PCB in position 3 will reduce the range to approximately 9m, with position 1 providing a range of approximately 6m. The recommended position setting for the PCB is in position 5.

When considering and deciding upon the mounting position for the PIR Detector the following points should be considered to ensure trouble free operation:

1. Do not locate the PIR Detector facing a window or where it is exposed to or facing direct sunlight. PIR Detectors are not suitable for use in conservatories.

2. Do not locate the PIR Detector where it is exposed to ventilators.

3. Do not locate the Detector directly above a heat source, (e.g. fire, radiator, boiler, etc).

4. Where possible, mount the PIR Detector in the corner of the room so that the logical path of an intruder would cut across the fan detection pattern. PIR Detectors respond more effectively to movement across the device than to movement directly towards it.

5. Do not locate the PIR Detector in a position where it is subject to excessive vibration.

6. Ensure that the position selected for the PIR Detector is within effective range of the Control Panel. It is recommended that prior to installation the Detector is set and tested with the Control Panel in Walk Test mode to ensure that they are within effective range.

Note: When the system is Armed, pets should not be allowed into an area protected by a PIR Detector as their movement would trigger the PIR Detector and trigger an alarm.

Note: DO NOT fix the PIR Detector to metalwork or locate the unit within 1m of metalwork (i.e. radiators, water pipes, etc) as this could affect the radio range of the Device.

Installing and configuring the PIR Movement Detectors

Ensure that the Control Panel is in Test mode.

1. Undo and remove the fixing screw from the bottom edge of the PIR Detector. Carefully pull the bottom edge of the Detector away from the rear cover and then slide down to release the top clips.

2. Carefully drill out the required mounting holes in the rear cover using a 3mm drill according to whether the unit is being mounted in a corner or against a flat wall.
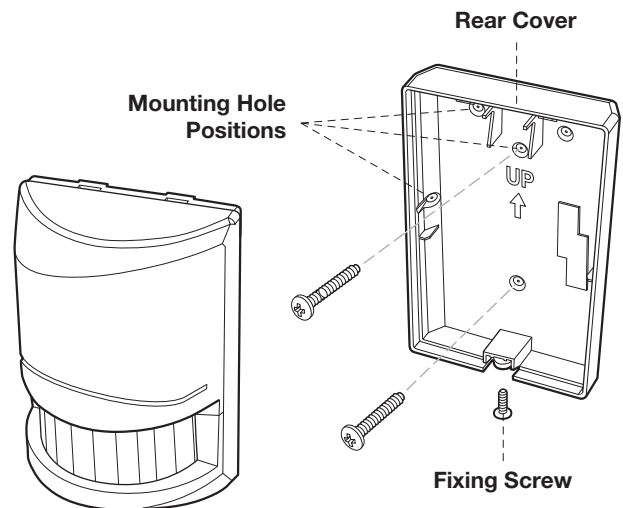
3. Using the rear cover as a template, mark the positions of the fixing holes on the wall.

4. Fix the rear cover to the wall using the two 18mm No. 4 screws and 25mm wall plugs, (a 5mm hole will be required for the wall plugs). Do not over-tighten the fixing screws as this may distort or damage the cover.

   Note: The wall plugs supplied with the product are not suitable for plasterboard walls, if mounting the PIR Detector onto plasterboard use proprietary wall plugs.

5. Set the House Code for the PIR Detector by setting DIP switches 1-8 of SW2 to the same ON/OFF combination as the House Code DIP switches in all other system devices.

6. Set the alarm zone which the Detector will operate on by setting DIP switches 1-3 of SW3 as follows:

	DIP 1	DIP 2	DIP 3
Zone 1	OFF	OFF	OFF
Zone 2	OFF	OFF	ON
Zone 3	OFF	ON	OFF
Zone 4	OFF	ON	ON
Zone 5	ON	OFF	OFF
Zone 6	ON	OFF	ON

7. DIP4 of SW3 is used to set the PIR Detector for walk test mode, which allows the operation of the Detector to be checked during installation without triggering a Full Alarm.

   ON   Walk Test mode
   OFF   Normal operation

Note: On initial installation the PIR Detector should be set into Walk Test mode ready for testing.

8. The PIR Detector incorporates a sensitivity feature designed to compensate for situations where the Detector may be affected by environmental changes, (e.g. insects, air temperature, etc). This feature is called "Detection Sensitivity" and may be set to Standard or High Sensitivity.

   Note: The higher the sensitivity the less movement will be necessary before the PIR Detector will trigger the alarm.

   The recommended setting is Standard Sensitivity. If set to High Sensitivity, in some cases, extreme environmental problems could cause unattributed false alarms. If this is experienced it may be necessary to reset the PIR Detector to Standard Sensitivity.

   Set the required detection sensitivity using DIP 5 of SW3 as follows:

OFF	Standard Sensitivity
ON	High Sensitivity

9. Connect the PP3 Alkaline battery to the battery clip.

   Note: When the 9V Alkaline battery is connected the LED behind the lens will rapidly flash for approximately 2-3 minutes until the PIR Detector has warmed up and stabilized. The LED will then stop flashing and turn OFF.

10. Check that the PIR Detector PCB is located and set in the correct position to give the detection zone pattern required.

    To adjust the PCB position, simply slide it up or down ensuring that the location legs are aligned with the required position number marked on the board.

PCB Positions Indicator
(positions 1-5)

PCB Position	Range
1	6m
3	9m
5	12m
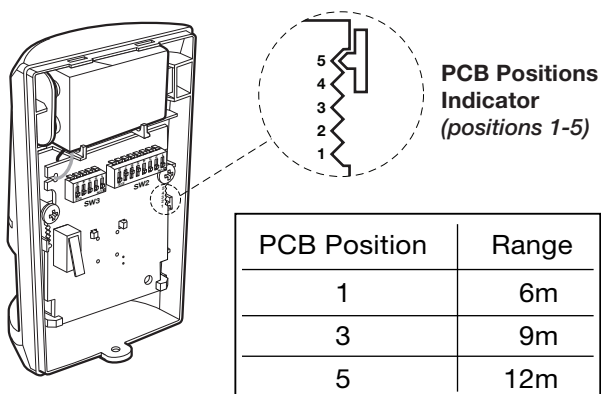
11. Refit the PIR Detector to the rear cover by offering the PIR Detector up to the rear cover and locate the clips in the top edge into the rear cover. Push the lower edge of the PIR Detector into place and refit the fixing screw in the bottom edge of the PIR Detector to secure in position. Do not over-tighten the fixing screws as this may damage the casing.

Testing the PIR Detectors

Ensure that the system is in Test mode.

Ensure that the PIR Detector is set in Walk Test mode, (i.e. DIP 4 of SW3 ON) and mounted in position on the wall. Allow 2-3 minutes for the PIR Detector to stabilize before commencing testing.

1. Put the Control Panel into "Walk Test" mode by pressing [1] on the Control Panel.

   The Panel will beep and the Zone 1 LED will illuminate.

2. Walk into and move slowly around the protected area, each time the PIR Detector senses movement the LED behind the lens will flash. In addition, the Control Panel will beep twice to indicate that the alarm signal has been received and the appropriate zone LED which the Detector is set for will illuminate.

   Note: In normal operation, the LED will not flash on movement detection. If necessary re-adjust the detection pattern by changing the mounting position of the PCB within the PIR Detector housing.

3. Reset the PIR Detector into Normal operation mode by switching DIP 4 of SW3 to the OFF position and refit in position.

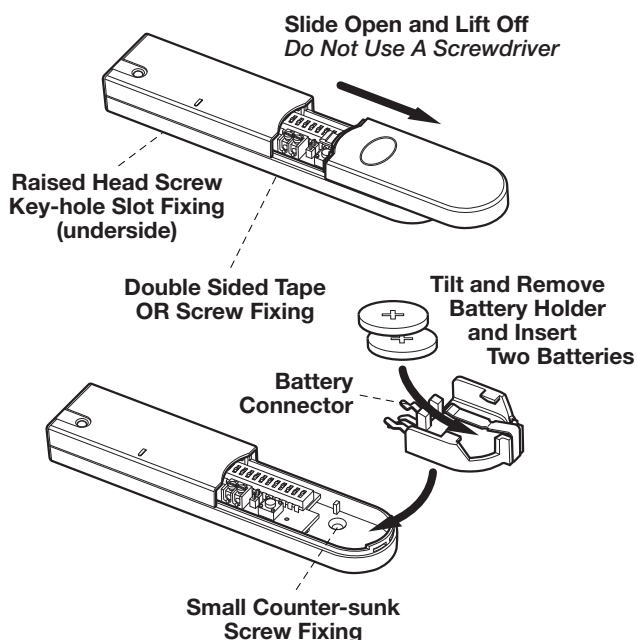4. Press [ESC] on the Control Panel to exit Walk Test mode.

   Note: When the PIR Detector is fully installed i.e. battery cover is refitted; the unit will not detect movement for approximately 45 seconds after each activation. (This feature is present to conserve battery power and maximize the battery life).

Magnetic Contact Detectors

Installing and setting the Magnetic Contact Detectors

Ensure that the system is in Test mode.

1. Remove the battery cover by sliding and lifting it off. (DO NOT use a screwdriver to lever off).

2. Remove the battery holder by carefully tilting up the end and pulling the connector off the printed circuit board.

Slide Open and Lift Off
Do Not Use A Screwdriver

Raised Head Screw
Key-hole Slot Fixing
(underside)

Double Sided Tape
OR Screw Fixing

Tilt and Remove
Battery Holder
and Insert
Two Batteries

Battery
Connector

Small Counter-sunk
Screw Fixing

3. Mount the Magnetic Contact Detector to the fixed part of the frame along the opening edge opposite the hinges using either the double sided adhesive tape or screws provided.

When fixing the Magnetic Contact Detector with screws, the top of the Detector is secured with a keyhole slot over the screw head of the smaller pan head screw. The bottom is secured using the 12mm countersunk head screw fitted within the battery compartment. Carefully drill out the centre of the fixing screw hole in the battery compartment using a 3mm drill. Do not over-tighten the fixing screws as this may distort or damage the casing.
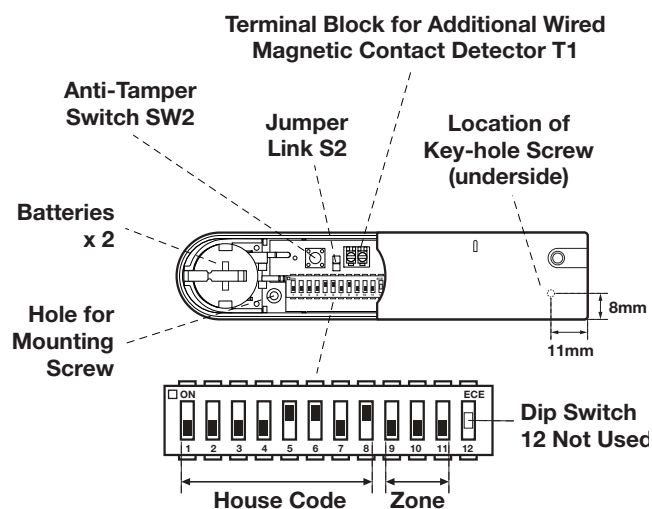
4. Fit the Magnet to the moving part of the door/window opposite the Magnetic Contact Detector using the two 15mm fixing screws. Ensuring that the parallel gap between the Magnet and Detector is less than 10mm and that the arrow on the Magnet is pointing towards and aligned with the mark on the top section of the Detector.

(Ensure back surfaces are flush)

Magnet

Detector

Cut-out for Cable Entry

Alternative Mounting
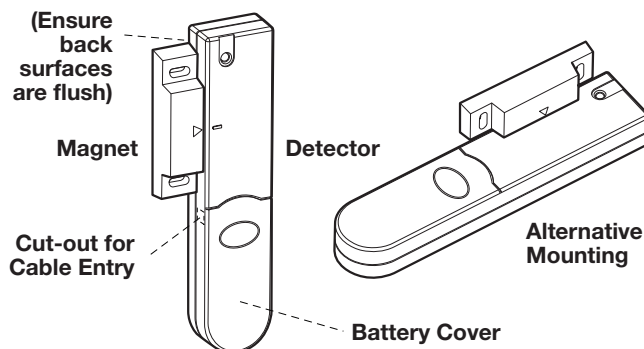
Battery Cover

5. If an additional wired Magnetic Contact Detector is required, this should be wired to the terminal block provided in the battery compartment. The wired contact should be connected using two core (24AWG) wire of maximum length 1.5m.

   Important: If an additional wired contact is not connected, then the jumper link SW2 must be fitted for the Magnetic Contact Detector to operate correctly.

6. Set the House Code for the Magnetic Contact Detector by setting DIP switches 1-8 to the same ON/OFF combination as the House Code DIP switches in all other system devices.

Terminal Block for Additional Wired Magnetic Contact Detector T1

Anti-Tamper Switch SW2

Jumper Link S2

Location of Key-hole Screw (underside)

Batteries x 2

Hole for Mounting Screw

8mm

11mm

Dip Switch 12 Not Used

House Code   **Zone**

7. Set the alarm zone which the Detector will operate on with DIP switches 9-11 as follows:

	DIP 9	DIP 10	DIP 11
Zone 1	OFF	OFF	OFF
Zone 2	OFF	OFF	ON
Zone 3	OFF	ON	OFF
Zone 4	OFF	ON	ON
Zone 5	ON	OFF	OFF
Zone 6	ON	OFF	ON

8. Slide the two batteries supplied into the battery holder, ensuring that the positive (+) side is uppermost on each battery as it is installed.

9. Carefully refit the battery holder onto the Detector ensuring that the spring connectors slide onto either side of the circuit board.

10. Fit the battery cover into position on the Magnetic Contact Detector.

Testing the Magnetic Contact Detectors

Ensure that the system is in Test mode.

1. Put the Control Panel into "Walk Test" mode by pressing [1] on the Control Panel.

   The Panel will beep and the Zone 1 LED will illuminate.

2. Remove the battery cover from the Magnetic Contact Detector.

   The LED on the Detector will illuminate for approx. 1 second as the battery cover is removed and the tamper switch is activated. In addition, the Control Panel will beep twice to indicate that the alarm signal has been received and the Tamper LED will illuminate.

3. Open the door/window to remove the magnet from the Detector.

   As the magnet is moved away from the Detector the LED will illuminate for approximately 1 second to indicate that the Detector has been triggered. In addition, the Control Panel will beep twice to indicate that the alarm signal has been received and the appropriate zone LED, which the Detector is set for, will illuminate.

4. If any external Magnetic Contact Detectors are connected to the Detector, operate these one at a time. Each time a contact is opened the LED on the Detector should illuminate for 1 second to indicate that it has been triggered.

5. Replace the battery cover on the Detector.

6. Press [ESC] on the Control Panel to exit Walk Test.

External Solar Siren

The Siren and Solar Panel are all encapsulated within a tough polycarbonate housing. This housing provides full protection against adverse weather conditions.

An LED/Strobe unit is built into the siren to act as a visible deterrent/indication that the system is active. The Strobe LEDs will slowly and alternately flash whether the system is armed or disarmed. However, during an alarm condition the Strobe LEDs will flash rapidly.

An integral anti-tamper switch provides additional security protection to the Solar Siren and will immediately generate a full alarm should any unauthorized attempt be made to interfere with and remove the Solar Siren cover.

The Solar Siren is powered by a high capacity battery. A Solar Panel mounted on the top of the housing charges the battery during daylight hours. During darkness, only a small amount of energy is required to operate the Solar Siren unit.

An Alkaline 9V PP3 battery is supplied in the Solar Siren to boost the initial power to the unit when the system is first activated until the Solar Panel charges the main battery.

Positioning the Solar Siren

The Solar Siren should be located in a prominent position so that it can be easily seen and heard. The Solar Siren should be mounted on a sound flat surface so that the rear tamper switch is not activated when mounted. Ensure that the tamper switch does not fall into the recess between brick courses as this could prevent the switch from closing and give a permanent tamper signal.

Although the Solar Siren is designed to work on any aspect wall, for optimum performance you should refrain from siting the unit on a north facing wall, where possible.

Shadows cast by neighbouring walls, trees and roof overhangs should also be avoided. If the Solar Siren is to be mounted below the eaves, it should be positioned a distance of at least twice the width of the eaves overhang below the eaves. Remember that in winter the sun is lower in the sky and you should avoid winter shadows where possible.
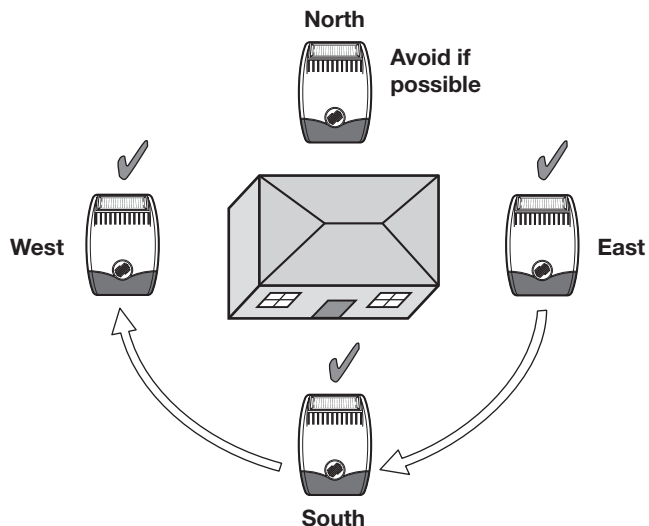
The Solar Siren contains a sophisticated radio receiver. However, reception of radio signals can be affected by the presence of metallic objects within the vicinity of the Solar Siren. It is therefore important to mount the Solar Siren a minimum distance of 1m away from any external or internal metalwork, (i.e. drainpipes, gutters, radiators, mirrors etc).

Ensure that the position selected for the Solar Siren is within effective range of the Control Panel, (refer to "Testing the Control Panel & Remote Control").

Installing the Solar Siren

1. Remove the fixing screw from the bottom edge of the Solar Siren Siren housing and carefully hinge off the front cover. All electronic components are housed within the front cover.

2. Hold the mounting plate in position and mark the positions of the four mounting holes (a spirit level placed on the casing will ensure a perfect level). Drill four 6mm holes and fit the wall plugs.

3. Fit the two 30mm fixing screws in the top holes leaving approx. 10mm of the screw protruding.

4. Fit the top keyhole slots of the mounting plate over the screw heads. Adjust the mounting plate and adjust the screws until they form a neat fit with the mounting plate with minimal movement

5. Secure the mounting plate in position using the two 25mm fixing screws in the bottom fixing holes.

6. Ensure that the Siren's main configuration switch on the LED Indicator board is set to "Siren".
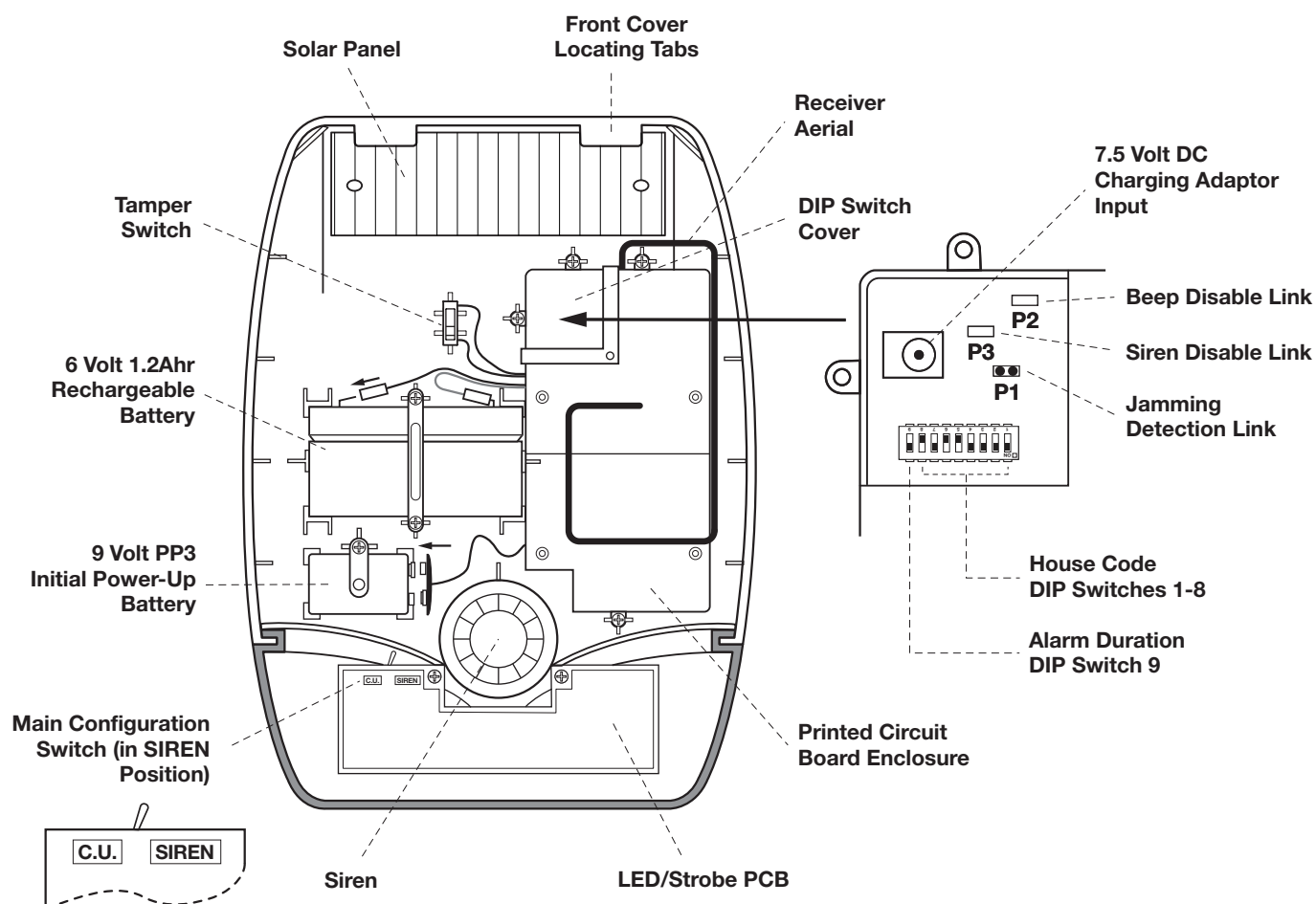

Inside view of Solar Siren

Setting the Solar Siren

Ensure that the Solar Siren main configuration switch if fitted on the LED strobe board is set to "SIREN" for use with this alarm system.

Undo the 3 screws holding the DIP Switch cover in place and remove the cover.

House Code

Under the corner cover you will find a series of 9 DIP switches.

Alarm Duration DIP switch 9

House Code
(Always change from the factory setting)
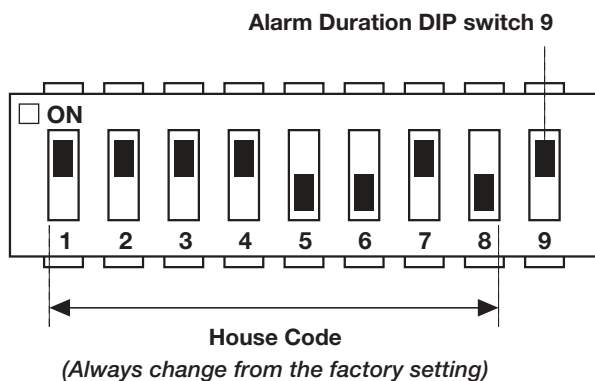
DIP switches 1-8 are used to set the House Code for the siren and must be set to the same ON/OFF combination as all other system devices.

Note: When the Solar Siren is viewed as shown above (Solar panel at top) the DIP switches are 'upside down'.

Alarm Duration Limit

If required the maximum length of time that the External Solar Siren will sound for when activated under an alarm condition may be limited to 3 minutes using DIP switch 9 as follows:

OFF   3 minute limit

ON   10 minutes or same as programmed setting on Control Panel.

Beep Disable

The Solar Siren will acknowledge Disarm signals from the Remote Control by beeping twice. It is possible to disable the beeps if required by removing the jumper link P2 on the circuit board.

Siren Disable

If for any reason you need to disable the Siren, remove jumper link P3 on the circuit board. This will prevent the Siren from sounding during an alarm condition. However, the Siren will still beep to acknowledge signals from the Remote Control, (provided the beep feature is not disabled).

Once you have completed configuring the Solar Siren, refit the DIP switch cover and replace the three cover fixing screws. Do not over tighten the screw as this could damage the thread.

Initial Power-Up of the Solar Siren

1. Connect the 9V PP3 initial power battery to the battery clip.

    Connect the rechargeable battery to the charging leads. Connect the Red lead to the Red (+) terminal and the Black lead to the Black (–) terminals.

    Note: Once the batteries have been connected, the Siren will be operational and it is important that the Solar panel receives sufficient light to maintain the battery charge. The Siren should not be operated repeatedly during installation and testing, as this will rapidly drain the battery. It is recommended that the Siren be left for at least a day in order to charge the battery before the system is armed.

2. Press the anti-tamper switch, the LEDs will flash together to indicate that the unit is operational.

3. Hinge the front cover locating tabs over the top edge of the back plate and carefully push the base of the siren cover into place. Secure the siren cover in place by refitting the fixing screw in the bottom edge of the cover. Do not over tighten the screw as this could damage the thread.

    Important: Ensure that the rear tamper switch is closed when you fit the siren cover to the back plate (i.e. listen for the switch to click). If the switch does not close this will prevent the Solar Siren from operating correctly.

4. The fitting of the Solar Siren is now complete.

Siren Service Mode

The Solar Siren includes a Service Mode facility which prevents the Siren's tamper switch from triggering an alarm whilst it is removed from the wall for maintenance or to change the batteries. After changing the batteries and refitting in position, the Solar Siren must be put back into Operating Mode, otherwise it will not sound in the event of an alarm.

Service Mode: Press and hold the ⊕ button on the Remote Control.

The Siren will produce two short beeps/LED flashes and then after approximately 6 seconds a

single long beep/LED flash followed immediately by two short beeps/LED flashes to indicate that it has switched into Service Mode.

Operating Mode: Press and hold the ⊕ button on the Remote Control.

After approximately 6 seconds the Siren will produce a single long beep/LED flash to indicate that it has switched into Operating Mode.
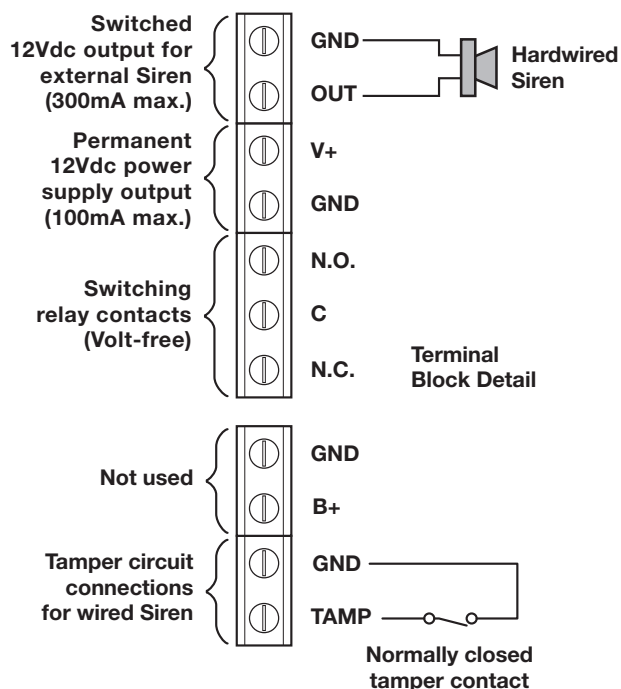
External Connections

The Control Panel incorporates a terminal block for connection of an external Hard-wired Siren or Telephone Dialler Unit. The connection terminal block is located inside the Control Panel behind the front cover.

To access the terminal block, press

⊕ , ? ? ? ? , ⏎
User Access Code

This puts the system into Test Mode and prevents an alarm occurring. Undo the two fixing screws on the top edge of the Control Panel and open the front cover.

Before making any connections, ensure that the memory jumper link P1 is in the 'OFF' position and then remove the DC power jack and disconnect the back-up batteries.

Terminal Block Detail

Switched 12Vdc output for external Siren (300mA max.)	GND — Hardwired Siren
	OUT
Permanent 12Vdc power supply output (100mA max.)	V+
	GND
Switching relay contacts (Volt-free)	N.O.
	C
	N.C.
Not used	GND
	B+
Tamper circuit connections for wired Siren	GND
	TAMP

Normally closed tamper contact

Note: Jumper link P51 should be fitted into the ON position only if the tamper circuit for a hardwired siren is used, otherwise it must be in the OFF position.

After making your external connections reconnect the power supply and back-up battery. Then close the

Control Panel cover and tighten the fixing screws on the top edge of the Control Panel.

Press ESC to leave Test mode and return to Standby.

Testing the System

Initial Testing

As the system is initially installed it is recommended that each device is tested in turn as it is installed, (refer to testing instructions for particular device).

Testing an Installed System

The Control Panel has a programmed test routine. You may test the system at any time, however it is recommended that the system is tested at regular intervals not exceeding 3 months.

With the system in Standby Mode with the Power LED ON.

Press ⊕ , ? ? ? ? , ⏎
User Access Code

The Arm and Part-Arm LEDs will flash.

The system is now in Test Mode

Note: After completing all required test functions press ESC to leave Test mode and return to Standby.

Detector Test

Before commencing testing please ensure that there is no movement in any PIR protected area for at least 2 minutes, all doors/windows protected by Magnetic Contact Detectors are closed and that all battery covers are correctly fitted.

Press 1

Zone LED 1 will illuminate.

Trigger each Detector on the system by either walking into a PIR Detector protected area or by opening a door/window protected by a Magnetic Contact Detector. As each Detector is triggered the Control Panel will beep and the LED of the zone which the Detector is set for will be illuminated. The Tamper switches of devices may also be tested in the same way in which case the Tamper LED on the Control Panel will be illuminated.

Press ESC to exit Detector test.

Hard-Wired Solar Siren Test

Press [2]

The internal relay driving the hardwired siren will be switched ON for a period of approximately 5 seconds. Zone LED 2 will be illuminated during the test.

Solar Siren Test

Press [3]

The Control Panel alarm and the External Solar Siren will be operated for a period of approximately 5 seconds with the external Solar Siren switching ON and OFF a few seconds after the Control Panel.

Zone LED 3 will be illuminated during the test.

Control Panel LED Test

Press [4]

Zone LED 4 will illuminate.

Use [▲] and [▼] buttons to scroll through and illuminate each LED in turn.

Press [ESC] to exit LED

Voice Dialler Test

Press [6]

Zone LED 6 will illuminate.

The voice dialler will call each activate number in the dialling sequence in turn. When a call is answered the pre-recorded alarm message will be replayed. If the call is unanswered or an acknowledgement signal is not received from the number called, (i.e. by pressing the button on the telephone keypad) the next number in the sequence will be called.

Press [ESC] to exit voice dialer test.

Factory Defaults

User Access Code	1 2 3 4
Alarm Duration	3 minutes
Hardwired Siren	Equal to Alarm Duration
Zone Operating Mode	Zones 1-6: Intruder
Part-Arm	Zones 1: Disabled Zones 2,3,4,5,6: Active
Instant/Delay	Zone 1: Delay Zones 2-6: Instant
Entry/Exit Delay	30s
Entry/Exit Warning Tone	On
Zone Lockout	On
Jamming Detection	Off
Phone Numbers	Not programmed
Message Play Time	70s
Alarm Message	Not programmed
Call Routing	All numbers disabled
Call Attempts	3
Dial Method	Tone/DTMF

Reset Factory Default Conditions

1. Press [⊕] , [?] [?] [?] [?] , [⏎]
   User Access Code

   to place the system in Test Mode.

2. Undo the Control Panel cover fixing screws and open the cover.

3. Switch OFF the mains supply to the plug-in PSU Adaptor.

4. Remove either back-up battery and disconnect the battery leads.

5. Set jumper link P1 to the ON position.

6. Reconnect the battery leads and replace the back-up battery in position.

7. The Control Panel will now set itself with all factory default settings. This takes approx. 10 seconds.

8. Reconnect and switch On the supply to the PSU adaptor.

9. Reset jumper link P1 into the OFF position.

10. Close the Control Panel cover and refit the fixing screws.

Programming Instructions

Press 🔑 , ❓ ❓ ❓ ❓ , ↵

<div align="center">**User Access Code**</div>

The Arm and Part-Arm LEDs will illuminate and all Zone, Fire and tamper LEDs will flash.

The system is now in Programme Mode

Note: After programming all required functions press [ESC] to leave Programme mode and return to Standby.

User Access Code

Default setting: 1 2 3 4

Press [1] [🔑]

Zone LEDs 1-4 will illuminate.

Enter a new 4 digit User Access code. As each digit is entered an illuminated zone LEDs will be turned OFF.

Press [↵] to save the new User Access code and return to programming mode.

Press [ESC] to return to programming mode without saving.

System House Code

Press [2] [🔑]

The Zone LEDs 1-6, Fire and Tamper LEDs will illuminate to display the current House Code setting with an illuminated LED indicating a setting of "on" in the House Code.

For example: A house code of 11110010, will be indicated with zone LEDs 1-4 ON and 5-6 OFF, Fire LED ON and Tamper LED OFF.

a) **At the Control Panel:**

By pressing buttons 1-8 on the Control Panel, setting the status LEDs so that they indicate the required house code setting. The LEDs will switch to the opposite state each time the button is pressed.

LED ON = (House Code DIP Switch On)
LED OFF = (House Code DIP Switch Off)

Press [↵] to save the new setting and return to programming

Press [ESC] to return to programming mode without saving.

b) **Using a Remote Control:**

With the required House Code already set in the remote, press the DISARM button on the Remote Control.

The Control Panel will beep twice to acknowledge the signal.

The Zone, Fire and Tamper LED status will be updated to correspond with the House Code set on the Remote Control and now programmed into the Control Panel.

Press [↵] to return to programming mode.

Instant Delay Zones

Default setting: Zone 1   Delay
                 Zones 2-6   Instant

Press [3] [🔑]

The zone LEDs corresponding to the zones currently set to Delay will be illuminated. LEDs for zones set to Instant will be OFF.

LED ON   Delay Zone
LED OFF   Instant Zone

To change the settings of a zone press the button corresponding to the zone number. The zones will switch to the opposite mode each time the button is pressed.

Press [↵] to save the new setting and return to programming mode.

Press [ESC] to return to programming mode without saving.

Entry/Exit Delay

Default setting: 30 seconds

Press [4] [🔑]

The zone LED corresponding to the current setting will illuminate.

0	no delay, (i.e. Instant)
1	10 seconds
2	20 seconds
3	30 seconds
4	40 seconds
5	50 seconds

Press the key corresponding to the required delay setting required, the corresponding zone LED will illuminate as the setting is changed.

Press [⏎] to save the new setting and return to programming mode.

Press [ESC] to return to programming mode without saving.

Alarm Duration

Default setting: 3 minutes

Press [5] [🔑]

The zone LED corresponding to the current setting will illuminate.

0	no alarm
1	1 minute
2	2 minutes
3	3 minutes
4	5 minutes
5	10 minutes

Press the key corresponding to the required alarm period, the corresponding zone LED will illuminate as the setting is changed.

Note: When set to 'No alarm' the Siren will sound for approx. 10 seconds if an alarm condition is initiated.

Press [⏎] to save the new setting and return to programming mode.

Press [ESC] to return to programming mode without saving.

Note: Following initiation of a Full Alarm condition the External Siren will continue to sound until either the system is Disarmed; or the Control Panel Alarm Duration Time expires; or if activated until the 3 minute alarm time limit of the external Siren expires; whichever occurs first.

Part-Arm

Default setting: Zone 1   Disabled
                         Zones 2-6   Active

Press [6] [🔑]

The zone LEDs corresponding to the zones currently active during Part-Arm mode will be illuminated. LEDs for zones disabled during PART-ARM will be OFF.

LED ON	Zone enabled in Part-Arm
LED OFF	Zone disabled in Part-Arm

To change the setting of a zone press the button corresponding to the zone number. The zone will toggle between the two modes each time the button is pressed.

Press [⏎] to save the new setting and return to programming mode.

Press [ESC] to return to programming mode without saving.

Zone Lockout

This feature, if enabled, prevents a single zone from triggering an alarm condition more than three times before the system is disarmed. However, if disabled there is no limit on the number of times a zone can trigger an alarm condition.

Default setting: ON

Press [7] [🔑]

The zone 1 LED will illuminate to indicate the current Zone Lockout status.

LED ON	Zone Lockout enabled
LED OFF	Zone Lockout disabled

Press [1] to change the setting to the opposite state.

Press [⏎] to save the new setting and return to programming mode.

Press [ESC] to return to programming mode without saving.

Entry/Exit Warning Tone

Default setting: ON

Press 8 🗝

The zone 1 LED will illuminate to indicate the current status of the Entry/Exit warning tone.

    LED ON   Tone enabled
    LED OFF   Tone disabled

Press 1 to change the setting to the opposite state.

Press ⏎ to save the new setting and return to programming mode.

Press ESC to return to programming mode without saving.

Jamming Detection

This feature controls the Control Panels RF jamming detection circuitry, which if enabled, will continuously scan for radio jamming signals on the system operating frequency.

Default setting: OFF

Press 9🔔 🗝

The zone 1 LED will illuminate to indicate the current Jamming Detector status.

    LED ON   Jamming Detection enabled
    LED OFF   Jamming Detection disabled

Press 1 to change the setting to the opposite state.

Press ⏎ to save the new setting and return to programming mode.

Press ESC to return to programming mode without saving.

Note: The jamming detection program setting will only control the jamming detection feature in the Control Panel.

Hard-Wired Siren

Default setting: equal to Alarm Duration

Press 1 0 🗝

The zone LED corresponding to the current setting will illuminate.

    0   2 seconds
    1   30 seconds
    2   1 minute
    3   3 minutes
    4   5 minutes
    5   equal to Alarm Duration

Press the key corresponding to the required Hardwired output activation period, the corresponding zone LED will illuminate as the setting is changed.

Press ⏎ to save the new setting and return to programming mode.

Press ESC to return to programming mode without saving.

Zone Operating Modes

Each alarm zone may be programmed to operate in one of 5 different modes depending on the type of alarm function it is required to perform.

Panic Alarm

- used to provide 24 hour monitoring of any Panic Switch fitted to the system. Activation of any Panic Switch will immediately initiate a Full Alarm condition.

24 Hour Intruder

- used to provide 24 hour monitoring of areas requiring continuous security protection even while the system is Disarmed, (e.g. gun cabinet, safe etc). Activation of any Detector on a security zone will immediately initiate a Full Alarm condition.

Fire

- used to provide 24 hour monitoring of any Fire/Smoke Detectors fitted to the system. Activation of any Detector will immediately initiate a Full Alarm condition.

Test

- when the system is armed, any Detector on the zone will cause the appropriate zone LED on the Control Panel to flash without initiating a Full Alarm condition.

Note: Panic switch, 24 Hour Intruder and Fire modes all operate on a 24 hour basis, (i.e. they are able to initiate a Full Alarm condition at any time irrespective of whether the system is Armed or Disarmed).

Default setting: all zones mode 2 (Intruder).

Press [1] [1] [🔑] to set zone 1

Press [1] [2] [🔑] to set zone 2

Press [1] [3] [🔑] to set zone 3

Press [1] [4] [🔑] to set zone 4

Press [1] [5] [🔑] to set zone 5

Press [1] [6] [🔑] to set zone 6

The zone LED corresponding to the current operating mode will illuminate.

Zone 1 LED	Panic Switch
Zone 2 LED	Intruder
Zone 3 LED	24 Hour Intruder
Zone 4 LED	Fire
Zone 5 LED	Test

Enter the key corresponding to the required operating mode, the corresponding zone LED will illuminate as the setting is changed.

Press [↵] to save the new setting and return to programming mode.

Press [ESC] to return to programming mode without saving.

Telephone Numbers

Default setting: not programmed (all numbers).

Press [1] [7] [🔑] to program phone no. 1

Press [1] [8] [🔑] to program phone no. 2

Press [1] [9🔔] [🔑] to program phone no. 3

Press [2] [0] [🔑] to program phone no. 4

Enter the new phone number (32 digits max).

Note: Press [🔑] to insert a 3.6 seconds pause in the number when dialed.

Press [↵] to save the new number and return to programming mode.

Press [ESC] to return to programming mode without saving.

Alarm Message Play Time

This is the total time for which the alarm messages will be played & repeated when a call made by the voice dialer is answered.

Default setting: 70s

Press [2] [1] [🔑]

The zone LED corresponding to the current setting will illuminate.

Zone 1 LED	50 seconds
Zone 2 LED	70 seconds
Zone 3 LED	90 seconds
Zone 4 LED	110 seconds

Enter the key corresponding to the required message play time, the corresponding zone LED will illuminate as the setting is changed.

Press [↵] to save the new setting and return to programming mode.

Press [ESC] to return to programming mode without saving.

Record Alarm Message

Default setting: not programmed

Press [2] [2] [🔑]

The zone 1 LED will illuminate.

Press [↵] to start the voice recorder.

Zone LED 1 will flash while recording. The maximum allowable length of the alarm message is 32 seconds. After this period the Control Panel will beep twice to indicate that the recording has stopped and returned to programming mode.

Alternatively press [ESC] to stop the recorder before the max 32 seconds and cancel any unused message time.

Replay Alarm Message

The recorded alarm message may be replayed and listened to using the telephone handset of a phone connected to another extension socket on the same phone line.

Press [2] [3] [🔑]

The zone 1 LED will illuminate.

Pick up the telephone handset and press [✳] to stop the dialing tone.

Press [⏎] to start replaying the recorded alarm message.

Zone LED 1 will flash while the alarm message is being replayed. At the end of the message the Control Panel will beep twice and return to programming mode. Alternatively press [ESC] to stop replaying the message before the end and return to programming mode.

Call Routing

This controls which telephone numbers are enabled in the dialing sequence and are dialed when the voice dialler is activated.

Default setting: all numbers inactive

Press [2] [4] [🔑]

Zone LEDs 1-4 will be illuminated to indicate the active status of telephone numbers 1-4 in the routing sequence. LEDs for telephone numbers disabled will be OFF.

LED ON   Telephone number enabled
LED OFF   Telephone number disabled

To change the active status of a phone number press the button corresponding to the phone number. The LED will toggle between states each time the button is pressed.

Press [⏎] to save the new number and return to programming mode.

Press [ESC] to return to programming mode without saving.

Call Attempts

This is the total time for which the alarm messages will be played & repeated when a call made by the voice dialer is answered.

Default setting: 3

Press [2] [5] [🔑]

The zone LED corresponding to the current setting will illuminate.

Zone 1 LED   1 attempt
Zone 2 LED   2 attempts
Zone 3 LED   3 attempts
Zone 4 LED   4 attempts
Zone 5 LED   5 attempts

Press the key corresponding to the required number of dialing attempts, the corresponding zone LED will illuminate as the setting is changed.

Press [⏎] to save the new setting and return to programming mode.

Press [ESC] to return to programming mode without saving.

Dial Method

This enables the telephone dialler to be set for the type of exchange it is connected to.

Default setting: Tone/DTMF

Press [2] [6] [🔑]

The zone LED corresponding to the current setting will illuminate.

1   Tone/DTMF
2   Pulse

Press the key corresponding to the required dial method, the corresponding zone LED will illuminate as the setting is changed.

Press [⏎] to save the new setting and return to programming mode.

Press [ESC] to return to programming mode without saving.

Operating Instructions

When leaving the premises, the system should be Armed. However, before doing so, check that all windows are closed and locked, all protected doors are closed and PIR Detectors are not obstructed. Ensure that pets are restricted to areas not protected by PIR Detectors.

The system has two armed modes, ARM and PART-ARM. The Part-Arm facility allows for selected zones to be left in a Disarmed state while the remainder of the system is Armed.

When the system is Armed (in either mode) the Zone LEDs for all active zones will illuminate for a few seconds, in addition the appropriate Arming Mode LED will flash. All active zones set as INSTANT will immediately be fully Armed. If enabled the System Exit delay will start and the Control Panel will start beeping with the beep rate increasing in steps as the delay expires. At the end of the Exit period all active zones set to DELAY will be fully Armed. By this time the user must have left the property and closed the final protected door.

If while the system is armed a Detector on an INSTANT zone is triggered then this will immediately initiate a Full Alarm condition with both Control Panel and Siren sounding. However, if a Detector on a DELAY zone is triggered, if enabled, the Entry Delay will start and the Control Panel will start beeping with the beep rate increasing in steps as the delay expires. If the system has not been Disarmed when the Entry Delay expires a Full Alarm condition will be initiated. If a Full Alarm condition occurs the appropriate zone LED that triggered the alarm will flash to indicate which zone the alarm was triggered from. If an alarm condition occurs, the zone that triggered the alarm will be indicated by the appropriate zone LED on the Control Panel being illuminated.

At the end of the programmed alarm duration the Siren and Control Panel alarms will stop and the system will automatically re-Arm itself, (subject to the conditions of the Zone Lockout feature).

Note: The Solar Siren will shut down either after the programmed alarm duration or after 3 minutes, if the 3 minute limit has been enabled on the Solar Siren.

Arming the System

ARM

The system can be set in ARM mode using either the Remote Control or the Control Panel as follows:

Remote Control:

Press the ⊕ button.

The Control Panel will acknowledge the signal by beeping.

Control Panel:

Press the Arm button followed by the User Access Code and then the Enter button:

⊕ , ? ? ? ? , ⏎
User Access Code

The Control Panel will acknowledge the signal by beeping.

PART-ARM

The system can be set in PART-ARM mode using either the Remote Control or the Control Panel as follows:

Remote Control:

Press the ⊕ button.

The Control Panel will acknowledge the signal by beeping.

Control Panel:

Press the Part-Arm button followed by the User Access Code and then the Enter button:

⊕ , ? ? ? ? , ⏎
User Access Code

The Control Panel will acknowledge the signal by beeping.

Disarming the System

The system can be disarmed using either the Remote Control or the Control Panel as follows:

Remote Control:

Press the ⊕ button.

The Control Panel will acknowledge the signal by beeping.

The Siren will also acknowledge the Disarm signal beeping twice unless beep disable has been set.

Control Panel:

Press the 'Disarm' key, followed by the current User Access code followed by the 'Enter' button

⊕ , ? ? ? ? , ⏎
User Access Code

The Control Panel will acknowledge the signal by beeping.

If the system has been triggered and an alarm condition has occurred, then the appropriate LED will be illuminated to indicate which zone(s) have triggered the alarm. Make a note of the zone(s) indicated to assist in tracing the cause of the alarm, before pressing to clear the indication and return the system to Standby.

Personal Attack (PA) Alarm

A full Alarm condition can be immediately initiated at any time (whether the system is Armed or Disarmed) in the event of threat or danger by activating a Panic Button on either the Remote Control or the Control Panel.

Remote Control:

Slide the Panic Button upwards.

Control Panel:

Press and hold the 9🔔 button for approximately 3 seconds.

The alarm will continue either for the alarm duration when the system will automatically reset or until the system is Disarmed from the Remote Control or Control Panel.

Tamper

If the battery cover of any device (except a Remote Control) is removed or if the Solar Siren or Control Panel are removed from the wall then a Full Alarm condition will be initiated even if the system is disarmed. The alarm condition will continue either for the alarm duration when the system will automatically reset or until the system is Disarmed from the Remote Control or Control Panel. The Tamper LED on the Control Panel will flash to indicate the Tamper Alarm has been activated.

Note: The Tamper protection facility on the Solar Siren operates independently of the Control Panel. If the Tamper on the Siren is activated this will not be indicated at the Control Panel.

Battery Monitoring

All system devices continuously monitor their battery condition. The Control Panel also monitors the battery condition of all PIR and Magnetic Detectors. If the battery level of any device drops below acceptable levels then its low battery indication will be activated.

In addition if any PIR or Magnetic Contact Detector has a low battery status it will be indicated on the 'LOW BAT' LED on the Control Panel.

LED Glowing	Magnetic Contact
LED Flashing	PIR

When a low battery indicator is activated the device will continue to operate normally for up to 2 weeks (depending on system use). However, the battery for that device should be replaced as soon as possible.

Note: Before removing the battery cover on any device to replace the battery, ensure that the system is put into Test mode to avoid initiating a Full Alarm condition.

The low battery indication for each system component is as follows:

Remote Control:

When the Remote Control is operated under low battery conditions the transmit LED will continue to flash after the button has been released.

Under normal battery conditions the LED will extinguish when the button is released.

PIR Movement Detector:

Under low battery conditions the LED behind the Detector lens will flash when movement is detected to indicate that the battery needs to be replaced.

Under normal battery conditions the LED does not illuminate unless the PIR Detector is in Walk Test mode.

Magnetic Contact Detector:

Under low battery conditions, when the Detector is activated, the transmit LED will be illuminated for approximately 1 second as the door/window is opened.

Under normal battery conditions the LED will not illuminate as the Detector is operated, (unless the Detector is in Test Mode with the battery cover removed).

Maintenance

Your Alarm System requires very little maintenance. However, a few simple tasks will ensure its continued reliability and operation.

Important: Should you, for any reason, have to completely power-down the system (e.g. to move the system to new premises) first put the system into Test mode before removing the Control Panel cover and disconnecting the power supply and back-up batteries. To power-down the Solar Siren, undo the fixing screw on the bottom edge and remove the front cover. As the cover is removed the Siren's Tamper switch will activate, immediately cancel the alarm using the Remote Control. Disconnect both the rechargeable battery and initial power-up battery and ensure that the Solar panel is covered with a light proof material to prevent it being energized.

Control Panel

The rechargeable batteries have a typical life of 3-4 years and need no maintenance during this period, provided they are kept charged. The batteries will be damaged if they are stored in a discharged state for long periods.

Detectors and Remote Control

The Detectors require very little maintenance. The batteries should be replaced once a year or when a low battery status is indicated.

Batteries

Before removing the battery cover on any device or opening the Control Panel to replace the battery ensure that the system is put into Test mode to avoid initiating a Full Alarm condition.

The specifications for replacement batteries are as follows:

Remote Controls	1 x 3V CR2032 Lithium Cells (or equivalent)
Magnetic Contact Detectors	2 x 3V CR2032 Lithium Cells (or equivalent)
PIR Movement Detectors	1 x 9V PP3 Alkaline

Note: Where applicable only fit PP3 Alkaline type batteries. Rechargeable batteries should NOT be fitted.

Disposal and Recycling

Disposal of this product is covered by the Waste Electrical or Electronic Equipment (WEEE) Directive.

It should not be disposed of with other household or commercial waste.

At the end of its useful life the packaging and product should be disposed of via a suitable recycling centre. Please contact your local authority or the retailer from where the product was purchased for information on available facilities.

DO NOT BURN.

The Rechargeable Batteries contain Sulphuric Acid – **DO NOT ATTEMPT TO OPEN THE CASING.**

Alarm Record

Complete the following information during installation for future reference when adding to your system and to assist Trouble Shooting Zone Settings.

Zone	Detector(s)	Location	Zone Settings			
			Zone Operating Mode	Instant / Delay	Arm	Part-Arm
1						
2						
3						
4						
5						
6						

You may make a note of your User Access Code and System House Code below.

User Access Code

System House Code

☐ ON   ECE

   1   2   3   4   5   6   7   8

e.g. ■ = ON

Use the above diagram to record your House Code

Voice Dialler Phone Numbers

Phone Number 1 --   Phone Number 2 ---

Phone Number 3 --   Phone Number 4 ---

This information is confidential and should be kept in a safe location.

Troubleshooting

Symptom / Recommendation	**Symptom** / Recommendation

Control Unit not working – Power LED OFF
 	
1. Mains power failure – check if other electrical circuits are operable.
 	
2. Check that the mains adaptor is plugged in and the socket is switched ON.
 	
3. Check that the DC Jack Plug from the Mains Adaptor is connected in the Control Panel.
 	
4. Check the fuse/MCB in the Consumer Unit on the circuit serving the Control Panel.
 	
   Note: Before replacing any fuses or resetting the MCB, the cause of the failure must be investigated and rectified.
 	
Control Unit "Low Battery" LED flashing
 	
1. Check all PIR Detectors for low battery indication, (i.e. LED behind detection lens flashes when movement detected). Renew batteries as required.
 	
Control Unit "Low Battery" LED illuminated
 	
1. Check all Magnetic Contact Detectors for low battery indication, (i.e. LED on Detector body illuminates for 1 second when Detector triggered). Renew batteries as required.
 	
Control Unit not accepting User Access Code
 	
1. Pause between key depressions too long. Do not pause for more than 5 seconds between pressing keys.
 	
2. Incorrect code entered. Allow 5 seconds to elapse before re-entering correct code.
 	
3. Reset to factory defaults and re-programme system.
 	
Control Unit not responding to Detectors
 	
1. Ensure that the 'House Code' is correctly set.
 	
2. Ensure Detector is within effective radio range of the Control Panel and equipment is not mounted close to metal objects.
 	
3. Detector battery low – Replace Detector battery.
	Detection Zone triggered (LED flashing) but no alarm is sounding
	
	1. Entry/Exit delay still running and not yet expired.
	
	2. Alarm duration period has already expired and system has reset.
	
	3. Alarm duration programmed to "no alarm".
	
	Full Alarm Condition occurs when system has not been triggered by an intruder or is disarmed
	
	1. Tamper switch activation
	
	   a. Check all Detector battery covers to ensure correctly fitted.
	
	   b. Check Control Panel and Siren are securely mounted to the wall and tamper switch is closed.
	
	2. Panic Alarm operated from a Remote Control or Control Panel.
	
	3. Jamming detection circuit operated.
	
	LED on Remote Control not illuminating, or is dim when unit is operated
	
	1. Ensure battery is connected with correct polarity.
	
	2. Ensure battery connections are good.
	
	3. Replace battery.
	
	PIR Movement Detector false alarming
	
	1. Ensure that the Detector is not pointing at a source of heat or a moving object.
	
	2. Ensure that the Detector is not mounted above a radiator or heater.
	
	3. Ensure that the Detector is not facing a window or in direct sunlight.
	
	4. Ensure that the Detector is not in a draughty area.
	
	5. Sensitivity detection set too high – reset to low sensitivity detection.

Symptom / Recommendation	*Symptom* / Recommendation

PIR Movement Detector not detecting a person's movement

1. Check battery connections are good.

2. Sensitivity detection set too low – reset to high sensitivity detection.

3. Check that the Detector is correctly set up.

4. Ensure DIP switches 1- 3 of SW3 are correctly set.

5. Ensure that Detector is mounted the correct way up, (i.e. with detection window at the bottom).

6. Ensure that the Detector is mounted at the correct height, (i.e. 2-2.5m).

7. Allow up to three minutes for Detector to stabilize.

8. Ensure Detector is within effective radio range of Control Panel and is not mounted close to metal objects which may interfere with RF transmission.

PIR Movement Detector LED flashes on detection of movement, (device in normal operation mode)

1. Low battery – replace battery.

Magnetic Contact Detector not working

1. Ensure batteries are connected with correct polarity.

2. Ensure battery connections are good.

3. Ensure 'House Code' is correctly set.

4. Ensure DIP switches 9, 10 and 11 are set correctly.

5. Ensure Detector is within effective radio range of Control Panel and is not mounted close to metal objects which may interfere with RF transmission.

6. If an additional Magnetic Contact Detector is not connected ensure jumper link fitted

7. If additional Magnetic Contact Detector is connected:

   a. Ensure jumper link removed.

   b. Check that additional contact is correctly wired.

   c. Ensure that Magnet is correctly positioned in relation to Detector and that the gap between Magnet and Detector is not too large.

Note: If an additional contact is used then the doors/windows protected by both the main wirefree Detector and the additional wired Detector must be closed when either is opened.

If one of the doors/windows is already open then the opening of the other door/window will not be detected.

Magnetic Contact Detector false alarming

1. Ensure that magnet is correctly positioned in relation to Detector.

2. Ensure that gap between magnet and Detector is less than 10mm.

3. Tamper switch below battery cover not depressed – check battery cover is fitted correctly and that fixing lugs are not broken.

LED on Magnetic Contact Detector illuminating when door or window is opened

1. Low battery – replace batteries.

Voice Dialler not operating

1. Check that phone line is operating normally by connecting a normal telephone to the socket that the Control Panel is plugged into and check for a dialing tone.

2. Check Control Panel is connected to telephone socket using lead supplied.

3. Voice dialer not configured correctly:

   a. Phone number(s) incorrectly programmed.

   b. Phone number(s) not enabled in Call Routing sequence.

   c. Alarm Message has not been recorded.

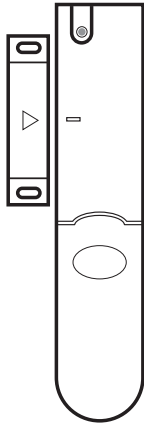   d. Dial method incorrectly set for type of exchange, (i.e. Tone/DTMF or Pulse).

Extending your Alarm System

Your system may be extended to provide additional protection by adding further PIR Movement Detectors, Magnetic Contact Detectors and Remote Control Units.
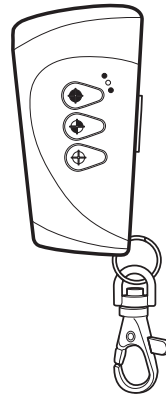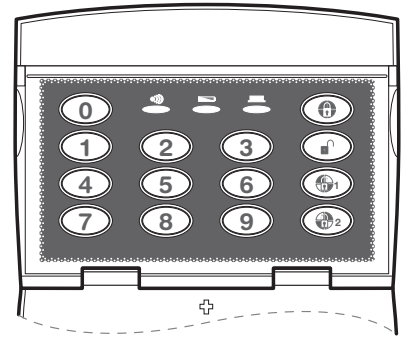
Accessories
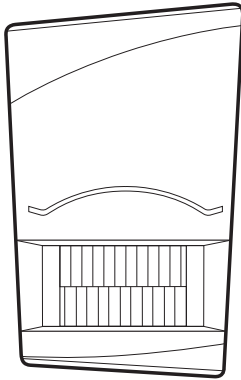
433MHz Wirefree Passive Infra-Red Movement Detector SAP E	433MHz Wirefree Magnetic Contact Detector SAM E	433MHz Wirefree Remote Control SAR E	433MHz Wirefree Remote Keypad SAKP E

Guarantee

The product is guaranteed for one year from the date of purchase against faulty materials and workmanship. No liability can be accepted for any problems caused by fair wear and tear, buyer's negligence, improper fitting or use, wilful or accidental damage, or any consequential loss or damage howsoever caused. This guarantee does not affect your statutory rights and is valid for UK and EIRE only.

If you believe the product to be faulty or in the unlikely event of the product developing a fault during the warranty period, then please contact our Customer Support Team on 0845 373 1353 for product assistance. Product repair or replacement will be offered for faulty products only with our prior agreement. Should you need to return a products then:

1. Contact the Help Line on the number above to obtain a Return Authorisation Number.

2. Adequately package your product to prevent damage in transit and include the following:

   a. A copy of your original invoice/receipt.

   b. A covering letter giving your full contact details, including email address (if applicable).

   c. A description of the fault or problem.
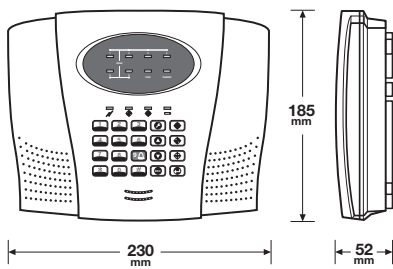
Research and Development

Our R & D Department is constantly developing new products. We practice a policy of continued improvement and reserve the right to change specifications without prior notice.

Notes:

Component Specification

Control Panel

- RF operating frequency: 433MHz
- Range: Up to 100 metres
- Battery Back-up
- Detector Battery Status Indication
- 6 Zones
- Part-Arm Facility
- Instant or Delayed Alarm Zones
- Entry/Exit Delay alarm mode
- Entry/Exit Delay Warning (selectable)
- 90dB High Power Piezo Siren
- Connections for Hardwired Siren and Auto Dialler
- Programmable 4 digit User Access Code
- Programmable Alarm Duration
- Programmable Entry/Exit Delay
- Auto Reset
- Zone Lockout
- Siren Disable (selectable)
- Dual front and rear anti-tamper
- Personal Attack (PA)
- Jamming Detection
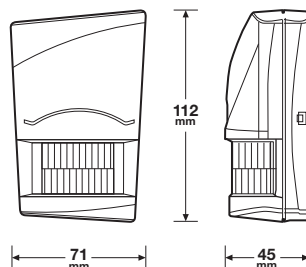- Low Battery Indicator

Remote Control
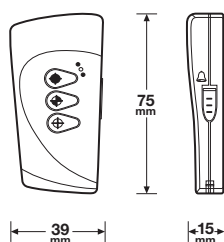
- RF operating frequency: 433MHz
- Range: Up to 100 metres
- Personal Attack (PA) switch
- Operates all ARM, PART-ARM and DISARM functions
- Transmission indicator
- Typical Battery life > 1 year
- Low battery indicator

External Solar Siren
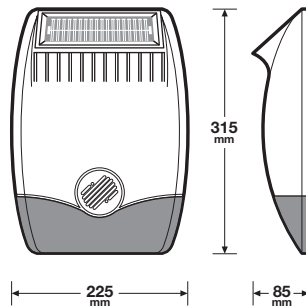
- RF operating frequency: 433MHz
- Sealed lead acid battery 6V/1.2Ahr
- Solar Panel 7.5V - Charge Rate typically 60mA
- Operation time in complete darkness – up to 25 days
- 95dB Piezo Siren
- 3 minute alarm duration limiter (optional)
- Auto reset
- Siren Disable (selectable)
- Dual front and rear anti-tamper protection
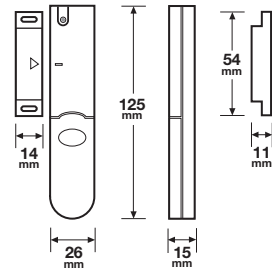- Jamming Detection
- Audible confirmation

Passive Infra-Red Movement Detector

- RF operating frequency: 433MHz
- Range: Up to 100 metres
- Detection range: up to 12m at 110°
- Walk test facility
- High/Low movement sensitivity settings
- Anti-Tamper protected
- Corner or surface mount
- Typical Battery Life > 1 year
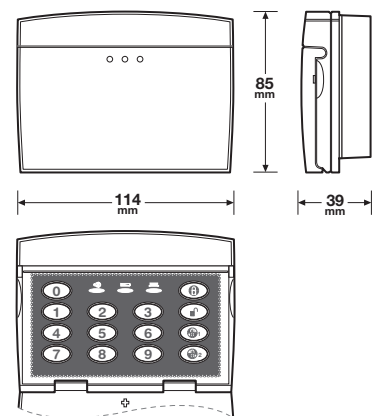- Low Battery Indicator

Magnetic Contact Detector

- RF operating frequency: 433MHz
- Range: Up to 100 metres
- Test Mode
- Anti-Tamper protection
- Facility to add external wired Magnetic Contact Detector or Personal Attack buttons
- Typical Battery Life >1 year
- Low Battery Indicator

Wirefree Remote Keypad
(optional accessory)

- RF operating frequency: 433MHz
- Range: Up to 100 metres
- Changeable 4 digit User Access code.
- Anti-Tamper protected
- Personal Attack (PA) facility
- Typical Battery Life > 1 year
- Low Battery Indicator

Note: Product images are for illustration purposes only. Actual design/appearance may vary however the Technical Specification will be as stated.

Customer Support Helpline: 0845 373 1353
(Local Call Rate - lines open 09.00 to 17.00 Monday to Friday)